

CLAIMS

What is claimed is:

1. An isolated and purified polypeptide comprising an amino acid sequence at least 85% identical to the amino acid sequence set forth in SEQ ID NO:3 or a
5 biologically-active fragment thereof capable of intracellular cholesterol transport.

2. The isolated and purified polypeptide according to claim 1 wherein the amino acid sequence is that of SEQ ID NO:3.

3. An isolated and purified nucleic acid that specifically hybridizes under stringent conditions to either strand of a denatured, double-stranded nucleic acid
10 encoding an amino acid sequence as set forth in SEQ ID NO:3.

4. The isolated and purified nucleic acid according to claim 3 wherein said denatured, double-stranded nucleic acid encoding an amino acid sequence as set forth in SEQ ID NO:3 is the nucleotide sequence of SEQ ID NO:1.

5. An expression vector comprising an isolated and purified nucleic acid
15 according to claim 3.

6. A transformed host cell or organism comprising an isolated and purified nucleic acid according to claim 3.

7. A method of preparing an isolated and purified polypeptide comprising AeSCP-2 or fragments thereof, comprising the step of culturing a transformed host cell or
20 organism of claim 6 under conditions conducive to expression of the polypeptide, and recovering the expressed polypeptide from the cell or organism in isolated and purified form.

8. A method of identifying whether a compound is an agonist or antagonist of AeSCP-2 biological activity, comprising the steps of:

- 5 (a) incubating an AeSCP-2 polypeptide comprising the amino acid sequence set forth in SEQ ID NO:3 or a biologically-active fragment thereof with a biological target in the presence of a compound; and
- (b) measuring the ability of the compound to enhance or block the interaction between the AeSCP-2 polypeptide or fragment thereof and the biological target to thereby identify an agonist or antagonist effective in altering AeSCP-2 biological activity.

10 9. A method according to claim 8 wherein the biological target is cholesterol and the AeSCP-2 biological activity is cholesterol transport.

10. A method for identifying compounds which bind to or interact with an AeSCP-2 polypeptide or fragment thereof, comprising the steps of:

- 15 (a) contacting an AeSCP-2 polypeptide or fragment thereof with a compound to be screened under conditions to permit binding to or interaction between the compound and the AeSCP-2 polypeptide or fragment thereof to assess the binding to or interaction with the compound, such binding or interaction being associated with a detectable signal in response to the binding or interaction of the AeSCP-2 polypeptide or fragment thereof with the compound; and
- 20 (b) determining whether the compound binds to or interacts with the AeSCP-2 polypeptide or fragment thereof by detecting the presence or absence of the signal generated from the binding or interaction of the compound with the AeSCP-2 polypeptide or fragment thereof.

11. The method according to claim 10 wherein the AeSCP-2 polypeptide has the amino acid sequence set forth in SEQ ID NO:3.